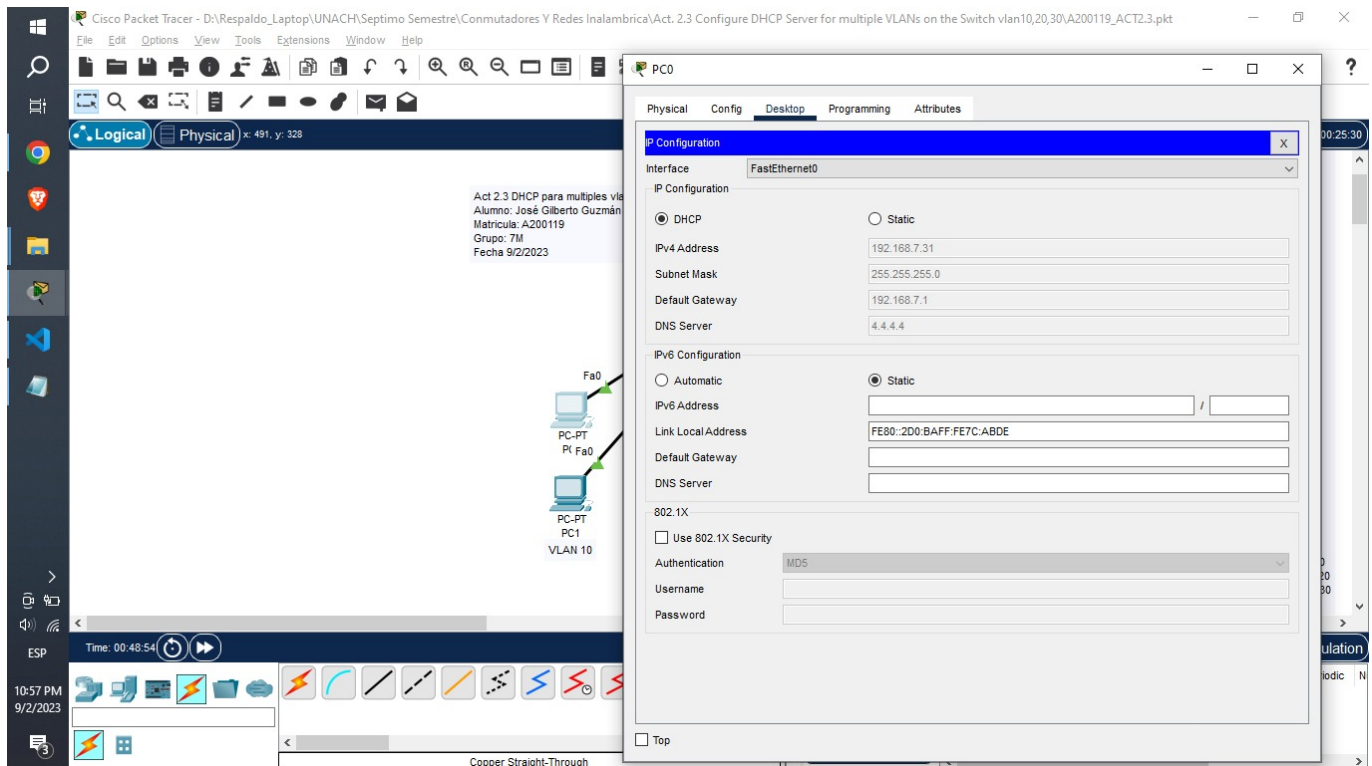


## 1. Activamos DHCP



Nota: Esto se debe de repetir con cada uno de los equipos.

## 2. Asignamos nombres

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name VLAN10
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name VLAN20
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name VLAN30
Switch(config-vlan)#exit
```

## 3. Configuración del Switch

```
Switch(config)#interface range FastEthernet 0/1-2
Switch(config-if-range)#switchport access vlan 10
Switch(config-if-range)#exit
Switch(config)#interface range FastEthernet 0/3-4
Switch(config-if-range)#switchport access vlan 20
Switch(config-if-range)#exit
```

```
Switch(config)#interface range FastEthernet 0/5-6
Switch(config-if-range)#switchport access vlan 30
Switch(config-if-range)#exit
Switch(config)#interface GigabitEthernet 0/1
Switch(config-if)#switchport mode trunk
Switch(config-if)#exit

Switch(config)#ip dhcp excluded-address 192.168.7.1 192.168.7.10
Switch(config)#ip dhcp excluded-address 192.168.7.11 192.168.7.20
Switch(config)#ip dhcp excluded-address 192.168.7.21 192.168.7.30
Switch(config)#ip dhcp pool vPool10
Switch(dhcp-config)#network 192.168.7.0 255.255.255.0
Switch(dhcp-config)#default-router 192.168.7.1
Switch(dhcp-config)#dns-server 4.4.4.4
Switch(dhcp-config)#exit
Switch(config)#ip dhcp pool vPool20
Switch(dhcp-config)#network 192.168.7.0 255.255.255.0
Switch(dhcp-config)#default-router 192.168.7.1
Switch(dhcp-config)#dns-server 8.8.8.8
Switch(dhcp-config)#exit
Switch(config)#ip dhcp pool vPool30
Switch(dhcp-config)#network 192.168.7.0 255.255.255.0
Switch(dhcp-config)#default-router 192.168.7.1
Switch(dhcp-config)#dns-server 30.0.0.2
Switch(dhcp-config)#exit
Switch(config)#interface vlan 10
Switch(config-if)#ip address 192.168.7.5 255.255.255.0
Switch(config-if)#exit
Switch(config)#interface vlan 20
Switch(config-if)#ip address 192.168.7.6 255.255.255.0
Switch(config-if)#exit
Switch(config)#interface vlan 30
Switch(config-if)#ip address 192.168.7.7 255.255.255.0
Switch(config-if)#exit
Switch(config)#
```

#### 4. Configuración del Router

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface GigabitEthernet 0/0/1
Router(config-if)#no ip address
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#interface GigabitEthernet 0/0/1.10
Router(config-subif)#encapsulation dot1Q 10
Router(config-subif)#ip address 192.168.7.1 255.255.255.0
Router(config-subif)#exit
```

```

Router(config)#interface GigabitEthernet 0/0/1.20
Router(config-subif)#encapsulation dot1Q 20
Router(config-subif)#ip address 192.168.8.1 255.255.255.0
Router(config-subif)#exit
Router(config)#interface GigabitEthernet0/0/1.30
Router(config-subif)#encapsulation dot1Q 30
Router(config-subif)#ip address 192.168.9.1 255.255.255.0
Router(config-subif)#

```

## 5. Comprobación de resultados

Cisco Packet Tracer - D:\Respaldo\_Laptop\UNACH\Septimo Semestre\Conmutadores Y Redes Inalambrica\Act. 2.3 Configure DHCP Server for multiple VLANs on the Switch vian10,20,30\A200119\_ACT2.3.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x: 850, y: 157

Act 2.3 DHCP para multiples vlans  
Alumno: José Gilberto Guzmán Gutiérrez  
Matricula: A200119  
Grupo: 7M  
Fecha 9/2/2023

Diagrama de red que muestra un router conectado a un switch. El switch tiene tres VLANs configuradas: VLAN 10, VLAN 20 y VLAN 30. Cada VLAN tiene una interfaz FastEthernet (Fa0/1-3) y una interfaz GigabitEthernet (Gi0/1). Los dispositivos conectados son:

- VLAN 10: PC-PT P1, PC-PT P2, PC-PT P3.
- VLAN 20: PC-PT P4, PC-PT P5, PC-PT P6.
- VLAN 30: PC-PT P7, PC-PT P8, PC-PT P9.

Configuración del switch:

```

Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name VLAN10
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name VLAN20
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name VLAN30
Switch(config-vlan)#exit
3. Configuración del Switch
Switch(config)#interface range FastEthernet 0/1-2
Switch(config-if-range)#switchport access vlan 10
Switch(config-if-range)#exit
Switch(config)#interface range FastEthernet 0/3-4
Switch(config-if-range)#switchport access vlan 20
Switch(config-if-range)#exit
Switch(config)#interface range FastEthernet 0/5-6
Switch(config-if-range)#switchport access vlan 30
Switch(config-if-range)#exit
Switch(config)#interface GigabitEthernet 0/1
Switch(config-if)#switchport mode trunk
Switch(config-if)#exit
Switch(config)#ip dhcp excluded-address 192.168.7.1 192.168.7.10
Switch(config)#ip dhcp excluded-address 192.168.7.11 192.168.7.20
Switch(config)#ip dhcp excluded-address 192.168.7.21 192.168.7.30
Switch(config)#ip dhcp pool vPool10

```

Realtime Simulation

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	N
Successful	PC0	PC1	ICMP	Green	0.000	N		
Successful	PC2	PC3	ICMP	Blue	0.000	N		
Successful	PC4	PC5	ICMP	Purple	0.000	N		

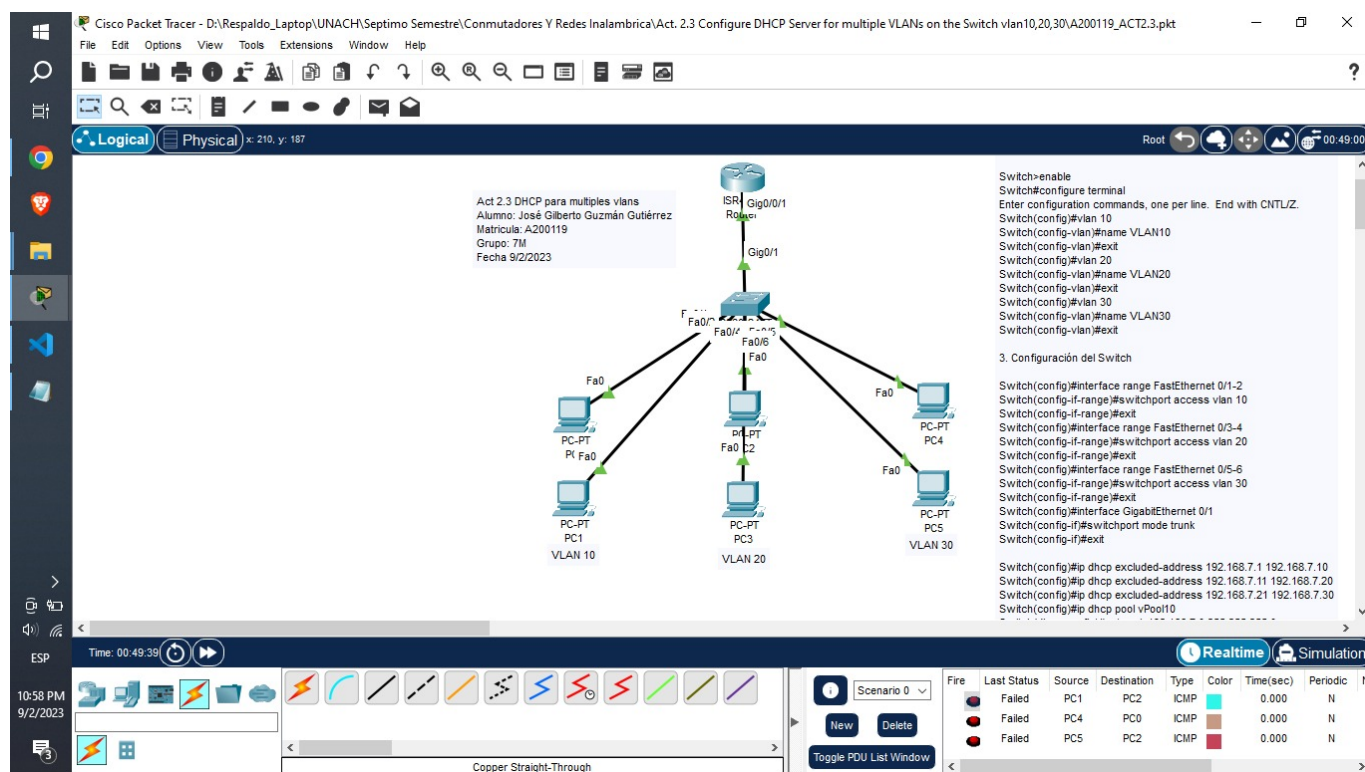
Scenario 0

New Delete

Toggle PDU List Window

Copper Straight-Through

Se **permite la comunicación** entre los equipos que forman parte de la misma vlan.



Se **restringe la comunicación** entre los equipos que no forman parte de la misma vlan.

## Carpeta de Github

[https://github.com/Gilberto-Guzman/Conmutadores-Y-Redes-](https://github.com/Gilberto-Guzman/Conmutadores-Y-Redes-Inalambricas/tree/main/Act.%202.3%20Configure%20DHCP%20Server%20for%20multiple%20VLANs%20on%20the%20Switch%20vlan10%2C%20%2C30)

[Inalambricas/tree/main/Act.%202.3%20Configure%20DHCP%20Server%20for%20multiple%20VLANs%20on%20the%20Switch%20vlan10%2C%20%2C30](https://github.com/Gilberto-Guzman/Conmutadores-Y-Redes-Inalambricas/tree/main/Act.%202.3%20Configure%20DHCP%20Server%20for%20multiple%20VLANs%20on%20the%20Switch%20vlan10%2C%20%2C30)